

II. Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. – 7. (Canceled)

8. (Currently amended) A labeled complex according to any one of claim 35 through claim ~~38~~ 37, wherein said first and second labeled substances are selected from the group consisting of a fluorescent substance, a mineral phosphate, a luminescent substance and a chemiluminescent substance.

9. (Previously presented) A labeled complex according to claim 8, wherein the first and second labeled substances are luminescent and can be discriminated by a method selected from the group consisting of excitation wavelength, emission wavelength, emission intensity, degree of emission polarization, emission phase and emission lifetime.

10. (Previously presented) A labeled complex according to claim 9, wherein said carrier is bonded to the target receptor by an avidin, biotin bond.

11. (Currently amended) A labeled complex according to any one of claim 35 through claim ~~38~~ 37, wherein said carrier is a magnetic particle, which can be controlled remotely.

12.- 34. (Canceled)

35. (Currently Amended) A labeled complex, comprising:
a carrier particle selected from the group consisting of a magnetic particle, charged particle, dielectric, chemotactic microorganism, synthetic resin bead, latex particle, glass bead, gel substance, and a metallic particle;
a number of single-stranded nucleic acid target receptors of length up to 10 microns, each single-stranded nucleic acid receptor having a first end bonded with said carrier particle, and a second end, ~~wherein the first end of each receptor is bonded with said carrier particle,~~
wherein said single-stranded nucleic acid target receptors are ~~single-stranded nucleic acids,~~
~~wherein the single-stranded nucleic acid is a gene, mRNA, tRNA, rRNA, a single-~~

stranded nucleic acid obtained by denaturation of a double stranded nucleic acid or
obtained by synthesis;

and

at least a first type and a second type of labeled substance, each labeled substance bonded to a fraction of
the number of single-stranded nucleic acid target receptors at the second end of each single-
stranded nucleic acid receptor, thereby forming a labeled complex having a predetermined molar
ratio of the types of labeled substances, in all of said labeled substances of the carrier particle;
wherein the number and length of single-stranded nucleic acid target receptors bonded to said carrier
particle is such that energy movement among the labeled substances and occurrence of quenching are
prevented, thereby enhancing consistent discrimination of emissions.

36. (Currently Amended) A labeled complex, comprising:

a carrier particle selected from the group consisting of a magnetic particle, charged particle, dielectric,
chemotactic microorganism, synthetic resin bead, latex particle, glass bead, gel substance, and a
metallic particle;

a number of double-stranded nucleic acid target receptors of length up to 10 microns, ~~wherein said target
receptors are double-stranded nucleic acids, each double-stranded nucleic acid target receptor
having a first single strand with a first end bonded to said carrier, and a second end, and having a
second single strand with a first end and a second end, each single strand having a first and a
second end, wherein the target receptor has a first end of a first single strand bonded with said
carrier;~~

wherein the double-stranded nucleic acid is a gene, a double stranded nucleic acid
obtained by using the polymerase chain reaction, a double stranded nucleic acid
having a recognition sequence of a restriction enzyme at one end, a double
stranded nucleic acid generated by annealing, or a double stranded nucleic acid
generated by DNA ligase;

and

at least a first type and a second type of labeled substance, each labeled substance bonded to a fraction of
the number of double-stranded nucleic acid target receptors at the second end of a the second
single strand, thereby forming a labeled complex having a predetermined molar ratio of the types
of labeled substances, in all of said labeled substances of the carrier particle;
wherein the number and length of target receptors bonded to said carrier particle is such that energy
movement among the labeled substances and occurrence of quenching are prevented, thereby enhancing
consistent discrimination of emissions.

37. (Currently Amended) A labeled complex, comprising:

a carrier particle selected from the group consisting of a magnetic particle, charged particle, dielectric, chemotactic microorganism, synthetic resin bead, latex particle, glass bead, gel substance, and a metallic particle;

a number of double-stranded nucleic acid target receptors of length up to 10 microns, ~~wherein said target receptors are double-stranded nucleic acids, each double-stranded nucleic acid target receptor having a first single strand having a first end and a second end, the second end bonded with said carrier, and having a second single strand, each single strand having a first and a second end, wherein the target receptor has a second end of a first single strand bonded with said carrier;~~

wherein the double-stranded nucleic acid is a gene, a double-stranded nucleic acid obtained by using the polymerase chain reaction, a double-stranded nucleic acid having a recognition sequence of a restriction enzyme at one end, a double-stranded nucleic acid generated by annealing, or a double-stranded nucleic acid generated by DNA ligase;

and

at least a first type and a second type of labeled substance, each labeled substance bonded to a fraction of the number of double-stranded nucleic acid target receptors at the first end of ~~the~~ a first single strand, thereby forming a labeled complex having a predetermined molar ratio of the types of labeled substances in all of said labeled substances of the carrier particle;

wherein the number and length of target receptors bonded to said carrier particle is such that energy movement among the labeled substances and occurrence of quenching are prevented, thereby enhancing consistent discrimination of emissions.

38. (New) A mixture of a first and a second labeled complex, each complex comprising:

a carrier particle selected from the group consisting of a magnetic particle, charged particle, dielectric, chemotactic microorganism, synthetic resin bead, latex particle, glass bead, gel substance, and a metallic particle;

a number of double-stranded nucleic acid target receptors of length up to 10 microns, each double-stranded nucleic acid target receptor having a first strand with a first end bonded to said carrier, and a second end, and having a second strand with a first end and a second end;

wherein the double-stranded nucleic acid is a gene, a double stranded nucleic acid obtained by using the polymerase chain reaction, a double stranded nucleic acid having a recognition sequence of a restriction enzyme at one end, a double

stranded nucleic acid generated by annealing, or a double stranded nucleic acid generated by DNA ligase;

and

at least a first type and a second type of labeled substance, each labeled substance bonded to a fraction of the number of double-stranded nucleic acid target receptors at the second end of the second strand, thereby forming a labeled complex having a predetermined molar ratio of the types of labeled substances, in all said labeled substances of the carrier particle;

wherein

the number and length of target receptors bonded to said carrier particle is such that energy movement among the labeled substances and occurrence of quenching are prevented, thereby enhancing consistent discrimination of emissions, and

wherein

the predetermined molar ratio of the types of labeled substances for a first labeled complex is different than the predetermined molar ratio of the types of labeled substances for the second labeled complex thereby providing for discrimination of emissions of the first complex and the second complex.